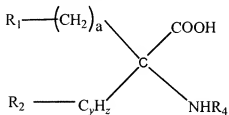


Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

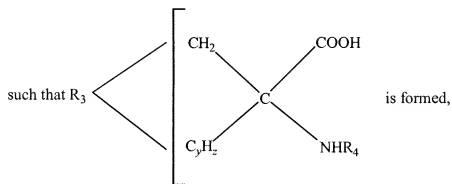
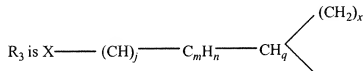
Listing of Claims:

1. (Original) An amino acid analog having the general structure



where R₁ is X, X—HC=CH—, or R₃

R₂ is H, or R₃ if R₁ is R₃,



R₄ is $-(\text{C}_k\text{H}_{2k+1})$, $-(\text{C}_k\text{H}_{2k-1})$ or $-(\text{C}_k\text{H}_{2k-3})$

And where a is 1 to 5,

x is 0 or 1,

y is 1 or 2,

z is 1, 2, 3 or 4 and $z > y$ if y is 2,
q is 1 or 0 if n is 1 and j is 0,
n is 1 or 2, but 0 if m is 0,
m is 0 or 1
j is 0, 1, 2 or 3
k is 1-5 and
X is ^{18}F , ^{123}I , ^{124}I , ^{125}I , ^{131}I , ^{75}Br , ^{76}Br , ^{77}Br , ^{82}Br , or At

2. (Original) The compound of claim 1, wherein R_1 and R_2 are R_3 .

3. (Original) The compound of claim 1, wherein x is 0

y is 1
z is 2
q is 1
m is 0 and j is 0.

4. (Original) The compound of Claim 3, wherein X is ^{18}F or ^{123}I .

5. (Original) The compound of Claim 3, wherein X is ^{18}F .

6. (Original) The compound of Claim 1, wherein R_1 and R_2 are R_3 ,

x is 0 or 1
y is 2
z is 4
q is 1
m and j are 0 and X is ^{18}F or ^{123}I .

7. (Original) The compound of claim 6, wherein x is 1 and X is ^{18}F .

8. (Original) The compound of Claim 6, wherein x is 0 and X is ^{123}I .
9. (Original) The compound of Claim 6, wherein x is 1 and X is ^{123}I .
10. (Original) The compound of Claim 1, wherein R1 and R2 are R3,
x is 0
y is 1
z is 2
q is 0
m is 1
n is 1
j is 0 and X is ^{18}F or ^{123}I .
11. (Original) The compound of claim 10, wherein X is ^{18}F .
12. (Original) A compound according to claim 1 wherein R₁ and R₂ are R₃,
x is 1
y is 1
z is 1
q is 0
m and j are 0, and
X is ^{18}F or ^{123}I .
13. (Original) A compound according to claim 12 wherein X is ^{123}I .
14. (Original) A compound according to claim 1 wherein R1 and R2 are R₃,
x is 0
y is 1
z is 2

q is 1
m is 1
n is 1
j is 1, and
X is ^{18}F , or ^{123}I .

15. (Original) The compound of claim 14 wherein X is ^{123}I .

16. (Original) A compound according to claim 1 wherein R_1 and R_2 are R_3 ,

x is 0
y is 1
z is 2
q is 0
m is 0
j is 1, and
X is ^{18}F , or ^{123}I .

17. (Original) The compound of claim 16 wherein X is ^{123}I .

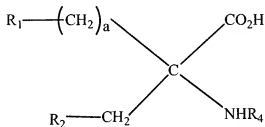
18. (Original) A compound according to claim 1 wherein R_1 and R_2 are R_3 ,

x is 0 or 1
y is 2
z is 4
q is 1
m is 1
n is 1
j is 1, and
X is ^{18}F , or ^{123}I .

19. (Original) The compound of claim 18 wherein X is ^{18}F .
20. (Original) The compound of claim 18 wherein X is ^{123}I .
21. (Original) A compound according to claim 1, wherein R_1 and R_2 are R_3 ,
x is 0 or 1
y is 2
z is 4
q is 0
m is 0
j is 1, and
X is ^{18}F , or ^{123}I .
22. (Original) The compound of claim 21 wherein X is ^{18}F .
23. (Original) The compound of claim 21 wherein X is ^{123}I .
24. (Original) A compound of claim 1 wherein R_1 and R_2 are not R_3 .
25. (Original) A compound according to claim 24 wherein X is ^{18}F .
26. (Original) A compound according to claim 1 wherein R_1 is $\text{X}-\text{CH}=\text{CH}-$,
 R_2 is H, y is 1 and z is 2.
27. (Original) The compound of claim 26 wherein X is ^{123}I .
- 28-44. Canceled

45. (Original) The compound of claim 1, wherein R_1 is ^{18}F , R_2 is H, y is 1, z is 2, and R_4 is $-\text{CH}_3$.

46. (Previously presented) An amino acid analog having the general structure



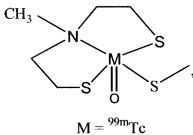
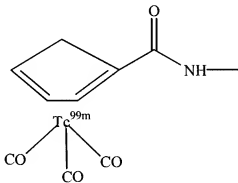
where R_1 is Z, a is 1 to 5,

R_4 is $-(\text{C}_k\text{H}_{2k+1})$, $-(\text{C}_k\text{H}_{2k-1})$, or $-(\text{C}_k\text{H}_{2k-3})$, and

R_2 is $-(\text{C}_k\text{H}_{2k+1})$, $-(\text{C}_k\text{H}_{2k-1})$, or $-(\text{C}_k\text{H}_{2k-3})$

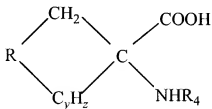
k is 1-5.

Z is

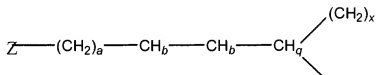


administering to a subject suspected of having a tumor an image-generating amount of a compound according to claim 1, and measuring the distribution of the compound in the subject by positron emission tomography.

48. (Previously presented) An amino acid analog having the general structure



where R is



where a is 1, 2 or 3

b is 0, 1 or 2

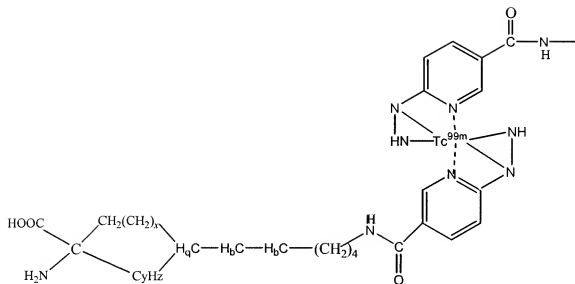
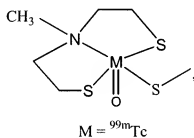
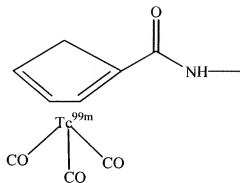
x is 0 or 1

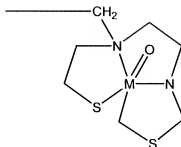
y is 1 or 2

z is 1, 2, 3 or 4 and z>y if y is 2,

q is 1 or 0

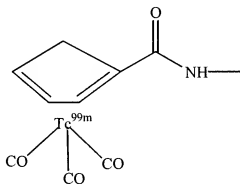
R₄ is -(C_kH_{2k+1}), -(C_kH_{2k-1}), or -(C_kH_{2k-3}), where k is 1-5, and Z is



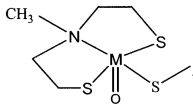


M = Tc or Re

49. (Previously presented) The compound of claim 48 wherein Z is

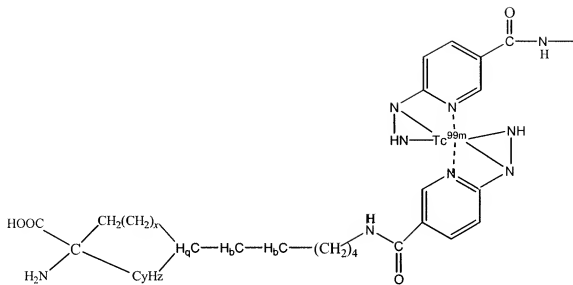


50. (Previously presented) The compound of claim 48 wherein Z is



M = ^{99m}Tc

51. (Previously presented) The compound of claim 48 wherein Z is



where a is 1, 2 or 3

b is 0, 1 or 2

x is 0 or 1

y is 1 or 2

z is 1, 2, 3 or 4 and $z > y$ if y is 2,

q is 1 or 0

52. (Previously presented) The compound of claim 48 wherein Z is

